

REMARKS/ARGUMENTS

Claims 1 to 18 are pending. Claims 1 to 18 have been amended. Support for Claim 1 is found on page 2, lines 17 to 21.

The Office Action stated that the following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office Action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The Examiner has not factually and/or legally proven in the record anticipation of any of applicants' claims.

The Office Action stated that the following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office Action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The Examiner has not proven in the record that any of applicants' claims are obvious over the rejection reference and the prior art as a whole.

The Office Action stated that the factual inquires set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103 (a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

The Examiner has not factually established in the record resolution (determination) of the level of ordinary skill in the pertinent art. Therefore, the obviousness rejection does not comply with the Supreme Court requirements. It has not factually and/or legally established in the record that applicants' claimed invention is obvious. Also, the Examiner has, therefore, not factually shown in the record establishment of *prima facie* obviousness of applicants' claimed invention.

The Office policy is to follow the Supreme Court's *Graham* decision in making determinations under Section 103(a). The obviousness rejection does not follow Office policy, hence the obviousness rejection is in error and should be withdrawn. The M.P.E.P., 2141.1 (Rev. 3), states:

"Office policy is to follow *Graham v. John Deere Co.* in the consideration and determination of obviousness under 35 U.S.C. 103. As

quoted above, the four factual inquiries enunciated therein as a background for determining obviousness are as follows:

(A) Determining the scope and contents of the prior art;

(B) Ascertaining the differences between the prior art and the claims in issue;

(C) Resolving the level of ordinary skill in the pertinent art; and

(D) Evaluating evidence of secondary considerations.” [Emphasis Supplied]

and also states:

“Accordingly, examiners should apply the test for patentability under 35 U.S.C. 103 set forth in Graham. See below for a detailed discussion of each of the *Graham* factual inquiries.”

The Section 103(a) rejection is incomplete and fails.

Claims 1 to 18 have been rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as being obvious over Shinagawa et al. (U.S. Patent No. 6,126,825). Applicants traverse this rejection.

Applicants' claimed invention requires “casting the solution onto a smooth substrate in an atmosphere comprising at least 1 percent by volume of solvent vapor at a temperature below the boiling point of the solvent, with substantially laminar gas flow being maintained over the smooth substrate”.

Shinagawa et al. does not mention or deal with laminar gas flow, or even gas flow. The Office Action does not assert that Shinagawa et al. teaches or even

suggests using laminar gas flow or even mention gas flow. Shinagawa et al. does not teach or suggest applicants' claimed invention as a whole.

Webster's Ninth New Collegiate Dictionary, (1989), states:

"**laminar flow** *n* (1935): streamline flow in a fluid near a solid boundary – compare TURBULENT FLOW" [Page 671]

All of applicants' claims require casting with a laminar gas flow of an atmosphere containing at least 1 volume percent of the solvent; after casting, the solvent is evaporated from the cast solution. Shinagawa et al. states:

"The norbornene resin solution thus prepared is subjected to casting on a support such as glass plates, plastic films, or metal plates with the aid of an applicator so as to be 50 from 500 microns in thickness. When a low boiling solvent such as methylene chloride is used, the solvent is preferentially evaporated by exposing the solution membrane having undergone the casting to a gentle wind at about room temperature to cause phase separation in the solution, thus a microporous membrane being formed." [Emphasis supplied] [Col. 6, line 63, to col. 7, line 4]

"A norbornene resin dissolved in such mixed solvents is subjected to casting on a support such as glass plates, plastic films, or metal plates with the aid of an applicator so as to be from 50 to 500 microns in thickness, and the solution membrane thus produced is gently dried by exposing the membrane to a breeze at room temperature or a lower temperature. This leads to preferential evaporation of a low boiling good solvent (c) to cause phase separation in the solution. Further, the membrane gels by the

complete evaporation of the good solvent (c) to form a microporous membrane. The poor solvents (d) and water left are removed by heating."

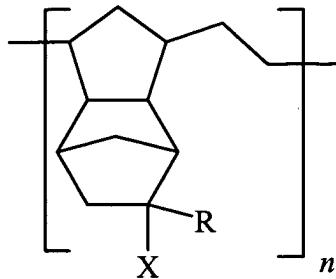
[Emphasis supplied] [Col. 8, lines 24 to 35]

"A solution comprising 12 parts of norbornene resin (Arton G, manufactured by Japan Synthetic Rubber Co., Ltd.), 65 parts of methylene chloride, 21 parts of methanol, and 2 parts of water was prepared, and stretched on a glass plate in thin layer form with the aid of an applicator. The resulting membrane was exposed to a breeze maintained at 25 °C. for about 1 hr to form a microporous membrane and further to a strong wind maintained at 60°C. to dry." [Emphasis supplied] [col. 9, lines 35 to 42]

All that Shinagawa et al. disclosed is that, after casting has been done, drying the already-cast material by evaporating solvent from the already-cast material by exposing the already-cast material to a "gentle wind" or "a breeze". Shinagawa et al.'s disclosure does not deal with the casting step.

Shinagawa et al., in effect, makes applicants' claimed invention non-obvious. The Examiner has not factually established in the record a *prima facie* showing of obviousness.

The Office Action stated that the invention of Claims 1 to 18 relates to a **process for producing an optical film from a polyolefin** of the formula:



in which at every occurrence of the substituents **R** and **X** they are either both **hydrogen** or **R** is **methyl** and **X** is a **polar group**, and **n** is a **number from 10 to 1000**. Applicants traverse this statement as an incorrect statement of applicants' claimed process and an unjustified attempt to generify applicants' claimed process. The invention of Claim 1 is the totality of every thing in Claim 1.

The Office Action continued by stating that the process involved **casting a solution of the polyolefin in an organic solvent** onto a substrate and **evaporating the solvent**. Applicants traverse this statement as being an incorrect statement of applicants' claimed process. Applicants' claimed process involves all of the recited steps, plus everything also recited in Claim 1.

The Office Action stated that the process included the steps of:

- (i) **dissolving the polyolefin** in an organic solvent or solvent mixture;
- (ii) **casting the solution onto a smooth substrate** in an atmosphere comprising at least 1 percent by volume of solvent vapor at a temperature below the boiling point of the solvent with substantially laminar gas flow;
- (iii) **evaporating the solvent** to obtain a self-supporting film; and

(iv) **peeling the film away from the substrate and drying at a temperature rising to 70 to 140 °C, without a resultant orientation of the film.**

Applicants also traverse this statement as being an incorrect statement of applicants' claimed process. Section 103(a) requires consideration only of the claimed invention as a whole. The M.P.E.P., 2141.II, (Rev. 3), states:

"When applying 35 U.S.C. 103, the following tenets of patent law must be adhered to:

(A) The claimed invention must be considered as a whole;
* * *. [Emphasis Supplied]

The Office Action stated that Shinagawa et al. (col. 2, line 17 to 50) discloses a membrane (or film) comprises a polymer that is substantially identical to the one as claimed. Applicants traverse this statement. The Examiner has not factually shown in the record that the membranes are substantially identical. Shinagawa et al. does not teach or suggest using laminar gas flow during casting.

The Office Action stated that, further, Shinagawa et al. (col. 4, line 56 to 67) discloses that the film can be prepared by dissolving the polyolefin in an organic solvent and casting the solution onto a substrate, and evaporating the solvent away. Applicants traverse the attempted implication of this statement because Shinagawa et al. does not teach or suggest the use of laminar gas flow during casting (and the Examiner has not even asserted that Shinagawa et al. does teach such).

The Office Action stated that, since the film of Shinagawa et al. is to be used as a membrane, the Examiner believes that the claimed “peeling the film away” feature is inherent to the process of Shinagawa et al. Applicants traverse this statement. The membrane might slide right off of the substrate of Shinagawa et al.; there are many ways the membrane and the substrate may have been separated or automatically separate; to assert peeling is mere speculation and is not inherent. The Examiner has not factually established in the record that silence in Shinagawa et al. has to inherently and exclusively mean separation by peeling.

The Office Action stated that regarding drying the film at a temperature rising to 70 to 140 °C, Shinagawa et al. (col. 7, line 35 to 43) clearly teaches heating the film to 70 °C to remove residual solvent. Applicants traverse this statement as being incorrect. Shinagawa et al. does not teach heat drying a membrane that has been peeled from the substrate (or prepared by casting using laminar gas flow). Shinagawa et al. deals with removing solvent from the membrane using a heated separate liquid wash solvent (e.g., isopropanol) (it does not dissolve the resin membrane); this has nothing with heat drying to remove solvent.

The Office Action stated that, regarding the claim “optical film” feature, in view of substantially identical composition of Shinagawa et al. and the composition claimed in applicants’ process, the Examiner has a reasonable basis that the claimed “optical film” feature is inherently possessed in Shinagawa et al. Applicants traverse this statement. The Examiner has not factually shown in the record that the compositions are substantially identical. The Examiner has not

carried his burden of proof. The Examiner's position is only speculation, which is insufficient under Section 103(a). The processes are different. The Examiner's rejection explanation does not even involve applicants' claim limitation of casting using laminar gas flow. There is no teaching or suggestion in Shinagawa et al. that its microporous membranes involve or are an optical film. Why would one ordinarily skilled in the art want a microporous membrane when such a person is seeking to produce an optical film? The Examiner has not answered this question.

It is quite clear to a person of ordinary skill in the art that the microporous membranes of Shinagawa et al. are not suitable as, or suggestive of, optical films. An optical film has to be transparent and non-porous while the microporous membranes of Shinagawa et al. are opaque (cf. Example 1, column 8, last line: "The **white** membrane formed..."). The process of Shinagawa et al. requires either casting at a high temperature with subsequent extraction of the casting solvent with another solvent in which the polymer is insoluble (cf. Claim 3) or using a mixture of a good solvent having a low boiling point, a poor solvent having a higher boiling point than the good solvent, and water as (cf. Claim 5), see column 6, line 54 through column 7, line 47. The Examiner has used forbidden hindsight to try to pick bits and pieces from the disclosure of Shinagawa et al. and tried to unsuccessfully reassemble them to arrive at something that is similar to the present claim invention.

The Office Action stated that, since the PTO does not have proper means to conduct experiments, the burden of proof is now shifted to applicants to show

otherwise. Applicants traverse this statement. The Examiner has incorrectly attempted to shift the burden of proof to appellants on the ground that the Patent Office does not have testing facilities. Since 1999 this ground is no longer viable. 35 U.S.C. 2(b) states:

“(b) SPECIFIC Powers.—The Office—

* * *

“(3) may acquire, construct, purchase, lease, hold, manage, operate, improve, alter, and renovate any real, personal, or mixed property, or any interest therein, as it considers necessary to carry out its functions;

(4)(A) may make such purchases, contracts for the construction, or management and operation of facilities, and contracts for supplies or services, without regard to the provisions of subtitle 1 and chapter 33 of title 40, title III of the Federal Property and Administrative Services Act of 1949 (41 U.S.C. 251 et seq.), and the McKinney-Vento Homeless Assistance Act (42 U.S.C. 11301 et seq.);

* * *

(5) may use, with their consent, services, equipment, personnel, and facilities of other departments, agencies, and instrumentalities of the Federal Government, on a reimbursable basis, and cooperate with such other departments, agencies, and instrumentalities in the establishment and use of services, equipment, and facilities of the Office;

(6) may, when the Director determines that it is practicable, efficient, and cost-effective to do so, use, with the consent of the United States and

the agency, instrumentality, Patent and Trademark Office, or international organization concerned, the services, records, facilities, or personnel of any State or local government agency or instrumentality or foreign patent and trademark office or international organization to perform functions on its behalf;" [Emphasis Supplied]

The Patent Office now has authority to conduct, or have conducted, tests at other governmental agencies, international organization, etc. Therefore, the Best decision rational is no longer valid. The burden of proof is still on the Examiner.

The Office Action cited *In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977); and *In re Fitzgerald*, 205 USPQ 594 (CCPA 1980). The basis for these cases no longer exists.

The Office Action stated that further, regarding the claimed "for optical film", applicants must recognize that a recitation of the intended use of the claimed invention must result in structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. Applicants traverse this statement as not being supported by Section 103(a). The Examiner has not made a prima facie case.

The Office Action stated that, if the prior art structure is capable of performing the intended use, then it meets the claim. Applicants traverse this statement. Process claims are involved.

This rejection should be withdrawn.

Reconsideration, reexamination and allowance of the claims are requested.

Respectfully submitted,

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Date

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